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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/597,154	06/20/2000	Gregory David Olson	P18652	5104

7055 7590 09/09/2005

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ART UNIT	**PAPER NUMBER**
2646	

DATE MAILED: 09/09/2005

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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 09/597,154
Filing Date: June 20, 2000
Appellant(s): OLSON, GREGORY DAVID

Bruce H. Bernstein
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 20 June 2005 appealing from the Office action mailed 20 December 2004.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The following are the related appeals, interferences, and judicial proceedings known to the examiner which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal:

None.

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,240,178	Pett et al.	5-2001 (filed 11-1998)
5,093,856	Atkinson et al.	3-1992
6,389,109	Schmidt et al.	5-2002 (filed 9-1998)
4,622,442	Martin	11-1986
5,929,402	Charles et al.	7-1999
4,348,669	Braun	9-1982
Impedance and Impedance Matching	National Instruments Website zone.ni.com	viewed 30 March 2005
6,314,181	Pett	11-2001 (filed 2-2000)

US Patent 6,314,181 is newly cited in this Answer to provide clarification of the disclosure of US Patent 6,240,178 and not as prior art or new grounds of rejection.

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1 through 4, 6 through 10, 13, 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pett et al. (US Patent 6,240,178) in view of Atkinson et al. (US Patent 5,093,856).

Regarding Claim 1, Pett discloses a subscriber loop (i.e., digital signal line transmission) system (Fig. 3; column 2, lines 28-45) comprising: a subscriber loop (i.e., communication line) (Fig. 3,

reference 30) between a central office (i.e., carrier) (Fig. 3, reference 22) and a customer premises (i.e., user terminal) (Fig. 3, reference 26); a bridged tap (i.e., a bridgetap line connected to the communication line) (Fig. 3, reference 32); a bridged tap terminator (i.e., adaptor) (Fig. 3, reference 50) connected to the bridged tap; the terminator (i.e. adaptor) including a capacitor (Fig. 7; reference CA, CL) and therefore inherently having a capacitance; wherein the adapter provides impedance matching (column 1, lines 61-63) that inherently reduces reflections (i.e., echoes) and improves reception of signals (i.e., rate of data transmission). Therefore, Pett anticipates all elements of Claim 1 except the adaptor including a capacitor in parallel with one of another capacitor and a diode. Atkinson discloses the use of a diode (Fig. 2, reference 235; column 4, lines 45-47) to protect components from surges on a telephone line. It would have been obvious to one skilled in the art at the time of the invention to apply the parallel diode as taught by Atkinson to the capacitor in the system taught by Atkinson for the purpose of protecting the capacitor from surges.

Regarding Claim 2, as shown above apropos of Claim 1, the combination of Pett and Atkinson makes obvious all elements except the capacitance being between approximately 0.04 and 2.0 microfarads. Pett does not disclose expressly the capacitance being between approximately 0.04 and 2.0 microfarads. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to utilize capacitance between approximately 0.04 and 2.0 microfarads. Appellant has not disclosed that the capacitance being between approximately 0.04 and 2.0 microfarads provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected appellant's invention to perform equally well with a capacitance of 0.023 microfarads (Pett: column 5, lines

25-29) because of the extreme variability in the properties of the bridged tap. Therefore, it would have been obvious to one of ordinary skill in the art to modify the combination of Pett and Atkinson to obtain the invention as specified in Claim 2.

Regarding Claim 3, as shown above apropos of Claim 1, the combination of Pett and Atkinson makes obvious all elements except the capacitance being approximately 0.05 microfarads. Pett does not disclose expressly the capacitance being approximately 0.05 microfarads. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to utilize capacitance of approximately 0.05. Appellant has not disclosed that the capacitance being approximately 0.05 microfarads provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected appellant's invention to perform equally well with a capacitance of 0.023 microfarads (Pett: column 5, lines 25-29) because of the extreme variability in the properties of the bridged tap. Therefore, it would have been obvious to one of ordinary skill in the art to modify the combination of Pett and Atkinson to obtain the invention as specified in Claim 3.

Regarding Claim 4, as shown above apropos of Claim 1, the combination of Pett and Atkinson makes obvious all elements except the capacitance being approximately 0.068 microfarads. Pett does not disclose expressly the capacitance being approximately 0.068 microfarads. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to utilize capacitance of approximately 0.068. Appellant has not disclosed that the capacitance being approximately 0.068 microfarads provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected appellant's invention to perform equally well with a capacitance of 0.023 microfarads (Pett:

column 5, lines 25-29) because of the extreme variability in the properties of the bridged tap. Therefore, it would have been obvious to one of ordinary skill in the art to modify the combination of Pett and Atkinson to obtain the invention as specified in Claim 4.

Regarding Claim 6, the additional recitation, "said adaptor changes a resonance characteristic of said bridgetap line to that of a bridgetap line that is approximately 300 feet longer" does not patentably distinguish the claim. While features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. See in re Schreiber, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429,1431-32 (Fed. Cir. 1997).

Claims 7, 9 and 10 are similarly directed to recitations of function rather than structure.

Regarding Claim 8, as shown above apropos of Claim 1, the combination of Pett and Atkinson makes obvious all elements except the bridgetap splicing into the line within approximately 1000 feet from the user terminal. Appellant discloses as prior art a bridgetap within approximately 1000 feet from the user terminal (disclosure: Fig. 1, reference A, B; p. 2. lines 13-14). It would have been obvious to one skilled in the art at the time of the invention to select a bridgetap within 1000 feet of the user terminal as is admitted as prior art for the bridged tap terminator taught by Pett for the purpose of mitigating degradation caused by the bridgetap.

Regarding Claim 13, Pett further discloses the terminator connected at the other end of the bridged tap from the subscriber loop (Fig. 3, reference 30, 32, 50).

Regarding Claim 22, Pett discloses terminating a bridged tap (Fig. 3, reference 32) on a subscriber loop (i.e., communication line) (Fig. 3; column 2, lines 28-45) between a central office (i.e., carrier) (Fig. 3, reference 22) and a customer premises (i.e., user terminal) (Fig. 3,

reference 26) with a capacitance of 23 nanofarads (0.023 microfarads). The capacitance of 26 gauge telephone line is on the order of 0.07 microfarads per mile (see Reference Data for Radio Engineers, p. 111). As such, the terminator disclosed by Pett adds capacitance (i.e., a resonance characteristic) equivalent to an additional bridged tap length of (0.023/0.07) 5280 feet or 1740 feet. As such, the terminator disclosed by Pett inherently changes the capacitance of the bridged tap to that of a bridgetap longer than 650 feet. Therefore, Pett anticipates all elements of Claim 22 except the adaptor including a capacitor in parallel with one of another capacitor and a diode. Atkinson discloses the use of a diode (Fig. 2, reference 235; column 4, lines 45-47) to protect components from surges on a telephone line. It would have been obvious to one skilled in the art at the time of the invention to apply the parallel diode as taught by Atkinson to the capacitor in the system taught by Atkinson for the purpose of protecting the capacitor from surges.
Regarding Claim 23, Pett further discloses providing DSL (i.e., digital subscriber line) service (column 3, lines 10-22).

Claims 5, 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pett in view of Atkinson and further in view of Schmidt et al. (US Patent 6,389,109).

Regarding Claim 5, as stated above apropos of Claim 1, the combination of Pett and Atkinson makes obvious all elements except a bridgetap line length between approximately 250 and 650 feet. Schmidt discloses substantial degradation due to bridged taps of length between about 200 and 700 feet (column 9, lines 63-67). It would have been obvious to one skilled in the art at the time of the invention to select bridged tap lengths between about 250 and 600 feet as taught by

Schmidt for the bridged tap terminator taught by Pett for the purpose of mitigating the degradation.

Regarding Claim 24, Pett discloses a subscriber loop (i.e., digital signal line transmission) system (Fig. 3; column 2, lines 28-45) comprising: a subscriber loop (i.e., communication line) (Fig. 3, reference 30) between a central office (i.e., carrier) (Fig. 3, reference 22) and a customer premises (i.e., user terminal) (Fig. 3, reference 26); a bridged tap (i.e., a bridgetap line connected to the communication line) (Fig. 3, reference 32); a bridged tap terminator (i.e., adaptor) (Fig. 3, reference 50) connected to the bridged tap; the terminator (i.e. adaptor) having a capacitance (Fig. 7; reference CA, CL). As such, Pett anticipates all elements except the adaptor including a capacitor in parallel with one of another capacitor and a diode and the capacitance being between approximately 0.04 and 2.0 microfarads and a bridgetap line length between approximately 250 and 650 feet. Atkinson discloses the use of a diode (Fig. 2, reference 235; column 4, lines 45-47) to protect components from surges on a telephone line. It would have been obvious to one skilled in the art at the time of the invention to apply the parallel diode as taught by Atkinson to the capacitor in the system taught by Atkinson for the purpose of protecting the capacitor from surges. Schmidt discloses substantial degradation due to bridged taps of length between about 200 and 700 feet (column 9, lines 63-67). It would have been obvious to one skilled in the art at the time of the invention to select bridged tap lengths between about 250 and 600 feet as taught by Schmidt for the bridged tap terminator taught by Pett for the purpose of mitigating the degradation. Therefore, the combination of Pett, Atkinson and Schmidt makes obvious all elements except the capacitance being between approximately 0.04 and 2.0 microfarads. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art

to utilize capacitance between approximately 0.04 and 2.0 microfarads. Appellant has not disclosed that the capacitance being between approximately 0.04 and 2.0 microfarads s provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected appellant's invention to perform equally well with a capacitance of 0.023 microfarads (Pett: column 5, lines 25-29) because of the extreme variability in the properties of the bridged tap. Therefore, it would have been obvious to one of ordinary skill in the art to modify the combination of Pett, Atkinson and Schmidt to obtain the invention as specified in Claim 24.

Regarding Claim 25, Pett further discloses providing DSL (i.e., digital subscriber line) service (column 3, lines 10-22).

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pett in view of Atkinson and further in view of Martin (US Patent 4,622,442). As stated above apropos of Claim 1, the combination of Pett and Atkinson makes obvious all elements except the capacitance having a voltage rating of at least 150 volts. Martin discloses lightning induces voltages as large as 1000 volts in subscriber loops (column 5, lines 33-36). It would have been obvious to one skilled in the art at the time of the invention to select a capacitor voltage rating to withstand expected lightning induced voltages as large as 1000 volts as taught by Martin in the bridged tap terminator taught by Pett for the purpose of avoiding destruction of the terminator.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pett in view of Atkinson and further in view of Charles et al. (US Patent 5,929,402). As stated above

apropos of Claim 1, the combination of Pett and Atkinson makes obvious all elements except the adaptor being water-tight. Charles discloses the use of a water-tight enclosure for outside plant equipment (column 3, lines 7-10). It would have been obvious to one skilled in the art at the time of the invention to use a water-tight enclosure as taught by Charles for the bridged tap terminator taught by Pett for the purpose of protecting the terminator against adverse weather conditions, water infiltration and corrosive environments.

Claims 14 through 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pett in view of Atkinson and further in view of Schmidt and further in view of Martin and further in view of Charles.

Claim 14 is essentially similar to Claim 2 with the additional limitations of Claims 5, 12 and 13. In addition, as stated above apropos of Claim 13, Pett further discloses the terminator connected at the other end of the bridged tap from the subscriber loop. Therefore, as stated above apropos of Claim 2, the combination of Pett and Atkinson is shown to make obvious all elements except a bridgetap line length between approximately 250 and 650 feet and the adaptor being water-tight. Schmidt discloses substantial degradation due to bridged taps of length between about 200 and 700 feet (column 9, lines 63-67). It would have been obvious to one skilled in the art at the time of the invention to select bridged tap lengths between about 250 and 600 feet as taught by Schmidt for the bridged tap terminator taught by Pett for the purpose of mitigating the degradation. Charles discloses the use of a water-tight enclosure for outside plant equipment (column 3, lines 7-10). It would have been obvious to one skilled in the art at the time of the invention to use a water-tight enclosure as taught by Charles for the bridged tap terminator

taught by Pett for the purpose of protecting the terminator against adverse weather conditions, water infiltration and corrosive environments.

Regarding Claim 15, as shown above apropos of Claim 14, the combination of Pett, Atkinson, Schmidt, Martin and Charles is shown to make obvious all elements except the capacitance being approximately 0.05 microfarads. The combination does not disclose expressly the capacitance being approximately 0.05 microfarads. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to utilize capacitance of approximately 0.05 microfarads. Appellant has not disclosed that the capacitance being approximately 0.05 microfarads provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected appellant's invention to perform equally well with a capacitance of 0.023 microfarads (Pett: column 5, lines 25-29) because of the extreme variability in the properties of the bridged tap. Therefore, it would have been obvious to one of ordinary skill in the art to modify the combination to obtain the invention as specified in Claim 15.

Regarding Claim 16, as shown above apropos of Claim 14, the combination of Pett, Atkinson, Schmidt, Martin and Charles is shown to make obvious all elements except the capacitance being approximately 0.068 microfarads. The combination does not disclose expressly the capacitance being approximately 0.068 microfarads. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to utilize capacitance of approximately 0.068 microfarads. Appellant has not disclosed that the capacitance being approximately 0.068 microfarads provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected appellant's invention to

perform equally well with a capacitance of 0.023 microfarads (Pett: column 5, lines 25-29) because of the extreme variability in the properties of the bridged tap. Therefore, it would have been obvious to one of ordinary skill in the art to modify the combination to obtain the invention as specified in Claim 16.

Regarding Claim 17, the additional recitation, "said adaptor changes a resonance characteristic of said bridgetap line to that of a bridgetap line that is approximately 300 feet longer" does not patentably distinguish the claim. While features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. See in re Schreiber, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429,1431-32 (Fed. Cir. 1997).

Claims 18, 20 and 21 are similarly directed to recitations of function rather than structure.

Regarding Claim 19, as shown above apropos of Claim 14, the combination of Pett, Atkinson, Schmidt, Martin and Charles is shown to make obvious all elements except the bridgetap splicing into the line within approximately 1000 feet from the user terminal. Appellant discloses as prior art bridgetap within approximately 1000 feet from the user terminal (disclosure: Fig. 1, reference A, B; p. 2. lines 13-14). It would have been obvious to one skilled in the art at the time of the invention to select a bridgetap within 1000 feet of the user terminal as is admitted as prior art for the combination of Pett, Atkinson, Schmidt, Martin and Charles for the purpose of mitigating degradation caused by the bridgetap.

(10) Response to Argument

Regarding Claim 1, appellant makes arguments on pages 8 through 10 of the Brief relating to the application of the teaching of Atkinson to the bridgetap terminator of Pett. Similarly to appellants claimed invention, Pett discloses a device that can be connected to the end of a bridgetap to reduce the degradation of DSL signals on a telephone line. Also similarly to appellant's claimed invention, the device taught by Pett uses a capacitance (Figs. 7-8, reference CL) to accomplish this. Pett additionally discloses a filter (Figs. 5, 7-8, reference 60) between the end of the bridgetap and the capacitance. While Pett discloses only that "Filter 60 provides high impedance for POTS signals and low insertion loss for DSL signals" (column 4, lines 30-32), a related application, filed on 28 February 2000 and now issued as US Patent 6,314,181, discloses that such filtering "minimizes loading within the POTS band" (column 2, lines 55-56). As such, while the filter disclosed by Pett avoids the potential problems of degradation of voice band transmission and ringing capability on the telephone line, it is the capacitance that is providing the improvement in data transmission capability on the DSL line.

Given the similarity in both purpose and structure between the claimed invention and the disclosure of Pett, appellant relies on the additional element of a diode (or another capacitor) in parallel with the capacitor in the adaptor. Appellant's disclosure is clear as to the purpose of the diode: "a zener diode or other similar solid state protective device 210, can be placed in parallel with capacitor 202 to provide voltage protection" (page 7, lines 9-11). As such, appellant relies for patentability on the well-known use of a diode for voltage protection of a device attached to a telephone line. Appellant admits in the Brief that "Atkinson discloses ...that a '[z]ener diode 235 is used to protect from high-voltage surges on the telephone line' (page 9), but relies for

patentability on the allegation that "the diode 235 ... appears to specifically protect the ... transformer 252 shown in FIG.3[C]". It is clear from Figs. 3A-3C in Atkinson that the diode 235 is disposed in parallel with the telephone line side winding of the transformer appellant admits it protects. As such, there is no doubt that Atkinson provides a teaching of protection of a circuit element with a diode disposed in parallel. Appellant's allegation that Atkinson does not teach a capacitor is a piecemeal attack on the references since Pett teaches the capacitor.

Appellant's allegation that the diode would complicate, enlarge of increase cost of a device is unpersuasive since Atkinson clearly teaches the use of the diode in spite of these factors, for the purpose of "protect[ion] from high-voltage surges on the telephone line". The telephone line in Atkinson is a standard telephone line. The line in Pett is a DSL line, which is physically a standard telephone line with additional equipment at the ends to transmit and receive data. As such, the DSL line in Pett is as susceptible to voltage surges as the line in Atkinson, and one skilled in the art would be motivated to provide similar protection. For similar reasons (i.e., the lines in Pett and Atkinson are physically similar), appellant's allegation that Atkinson is non-analogous art is unpersuasive.

Appellant makes arguments on pages 10-11 of the Brief relating to the functional limitation of Claim 1: "wherein said adaptor reduced the effects of echo from said bridgetap line on a rate of data transmission to said user terminal over said communication line". These arguments are unpersuasive. Appellant admits that the matching circuit disclosed in Pett "will ensure that reflections are not generated when the signal passes from the bridged tap 32 to the bridged

tapped terminator". This is in direct contrast to what happens when a signal reaches an unterminated bridge tap and is reflected (see first paragraph on page 2 of the National Instruments document). By preventing reflections (i.e., echo) from the end of the bridge tap, the device in Pett provides improved reception of signals (i.e., reduces the effect of this echo on data transmission rate).

Regarding Claim 2, appellant makes arguments on pages 12 and 13 of the Brief relating to the design choice rejection. Appellant alleges that the disclosure that "'[a] capacitance between approximately 0.040-2.0 mf will achieve' a change in the resonance characteristic of a bridgetap to simulate the resonance characteristic of a much longer bridgetap" discloses an advantage resulting from the claimed value. Examiner respectfully disagree. While the disclosure asserts these values achieve this result, it does not indicate that other values will not. The capacitance value disclosed in Pett (0.023 mF) is very close to the low end of the claimed range. In addition, the actual low end of the claimed range is somewhat less than 0.040 mF as indicated by the modifier "approximately". Further, Pett discloses 0.023 mF as a "nominal" value as a compromise for the extreme variability of the telephone line environment in terms of wire gauge and other factors (column 5, lines 1-37). As such, one skilled in the art would have motivation to depart from the value of 0.023 mF to achieve better results for larger or smaller wire gauges, longer or shorter bridgetaps and bridgetaps located at differing locations on the telephone line. The broad nature of the range claimed, the variable nature of the environment and the clear disclosure in Pett that the value given is "nominal" and "an example" makes the design choice

rejection proper. Such modification would clearly not "destroy" the function of the terminator in Pett since it is clear that one skilled in the art would determine other operable values. Further it is clear from Pett that the additional capacitance values referred to by appellant (i.e., C1 and C2) are part of the filter used to provide a high impedance at POTS frequencies and not part of the impedance matched termination. Further, appellant uses a broad recitation in the independent claim: "said adaptor having a capacitance". This limitation does not require the capacitance to be the only capacitance in the adaptor, it only requires that the adaptor have that capacitance, possibly among others.

Regarding Claims 3 and 4, the closeness of the values claimed to that explicitly disclosed in Pett, the use of the broadening modifier "approximately" make the rejections proper for reasons similar to those stated above apropos of Claim 2.

Regarding Claims 6 and 7, appellant makes arguments on pages 15 through 19 of the Brief regarding the functional limitations in those claims. The limitations are characterized by the broadening modifiers "approximately" and "at least". In addition, the claim is not specific about which "resonance characteristic" of the bridgetap line is altered. As stated above apropos of Claim 1, Pett discloses a bridgetap terminating capacitance of 0.023 mF. As shown above apropos of Claim 22, the terminator disclosed by Pett adds capacitance (i.e., a resonance characteristic) equivalent to an additional bridged tap length of (0.023/0.07) 5280 feet or 1740 feet. As such, the terminator disclosed by Pett inherently changes the capacitance of the bridged

tap to that of a bridgetap at least approximately 300 feet longer or approximately 400 feet longer. As such, the inherency of the claimed functional limitation in the reference is shown.

Regarding Claims 9 and 10, appellant makes arguments on pages 19 through 20 of the Brief regarding the functional limitations in those claims. The limitations are characterized by the broadening modifiers "approximately" and "at least". As such, any improvement of approximately 300 kb/s meets the claims. Comparison of Figs. 2 and 4 in Pett shows the terminator removes two dips in the DSL line transfer function that render approximately 20% of the DSL bandwidth unusable. Since full DSL bandwidth is 1.5 Mb/s, the 20% that the terminator makes useful equates to 300kb/s.

Regarding Claim 22, appellant makes arguments on page 20 of the Brief regarding the combination of the terminator in Pett and the diode in Atkinson. These arguments are unpersuasive for reasons stated above apropos of Claim 1.

On pages 20 through 21, appellant makes arguments regarding the step of "changing a resonance characteristic of said bridgetap line". The claim is not specific about which "resonance characteristic" of the bridgetap line is altered. As stated above apropos of Claim 1, Pett discloses a bridgetap terminating capacitance of 0.023 mF. As shown above, the terminator disclosed by Pett adds capacitance (i.e., a resonance characteristic) equivalent to an additional bridged tap length of (0.023/0.07) 5280 feet or 1740 feet. As such, the terminator disclosed by Pett inherently changes the capacitance of the bridged tap to that of a bridgetap line longer than 650 feet.

Regarding Claim 23, appellant makes arguments on page 21 of the Brief regarding the dependence of Claim 23 from Claim 22. These arguments are unpersuasive for reasons stated above apropos of Claim 22.

In addition, appellant alleges that the combination fails to disclose "providing digital signal line service to said user terminal". Examiner respectfully disagrees. Pett discloses providing DSL (i.e., digital subscriber line) service (column 3, lines 10-22).

Regarding Claim 5, on page 23 of the Brief, appellant makes arguments regarding the dependence of Claim 5 from Claim 1. These arguments are unpersuasive for reasons stated above apropos of Claim 1.

Appellant further alleges that the cited prior art fails to teach a "bridgetap line between approximately 250-650 feet", as claimed. Examiner respectfully disagrees. As stated above under Grounds of Rejection, Schmidt discloses bridgetaps between 200-700 feet.

Regarding Claim 24, on page 24 of the Brief, appellant makes arguments regarding capacitance values similar to those made apropos of Claims 2 and 14. These arguments are unpersuasive for reasons stated above apropos of those claims. Regarding the capacitance and diode configuration, appellant refers back to arguments made apropos of Claims 1 and 22. These arguments are unpersuasive for reasons stated above apropos of those claims. On pages 24-25 of the brief, appellant alleges that proper motivation has not been shown for the modification of

Pett. Examiner respectfully disagrees. As shown above apropos of Claims 1 and 22, motivation has been shown.

Regarding Claim 25, on page 25 of the Brief, appellant makes arguments regarding the dependence of Claim 25 from Claim 24. These arguments are unpersuasive for reasons stated above apropos of Claim 24.

Appellant further alleges that the cited prior art fails to teach "providing digital line service to said user terminal". Examiner respectfully disagrees. As stated above under Grounds of Rejection, Pett discloses providing DSL service, which is a digital line service to a user terminal.

Regarding Claim 11, on page 26 of the Brief, appellant makes arguments regarding the dependence of Claim 11 from Claim 1. These arguments are unpersuasive for reasons stated above apropos of Claim 1.

Appellant further alleges that the cited prior art fails to teach the "capacitance has a voltage rating of at least 150v.". Examiner respectfully disagrees. As stated above under Grounds of Rejection, Martin discloses that lightning induces such voltages in subscriber loops and, as such, one skilled in the art would be motivated to ensure that devices connected to a subscriber loop would withstand such voltages. On page 27 of the brief, appellant alleges that proper motivation has not been shown for the modification of Pett. Examiner respectfully disagrees. As shown above under Grounds of Rejection, apropos of Claim 11, motivation has been shown.

Regarding Claim 12, on page 28 of the Brief, appellant makes arguments regarding the dependence of Claim 12 from Claim 1. These arguments are unpersuasive for reasons stated above apropos of Claim 1.

Appellant further alleges that the cited prior art fails to teach the "adapter is water-tight". Examiner respectfully disagrees. As stated above under Grounds of Rejection, Charles discloses use of a water-tight enclosure for telephone equipment located outdoors. Appellant alleges that proper motivation has not been shown for the modification of Pett. Examiner respectfully disagrees. As shown above under Grounds of Rejection, apropos of Claim 12, motivation has been shown.

Regarding Claim 14, on pages 29-31 of the Brief appellant repeats arguments made apropos of Claims 1, 2 and 22. These arguments are unpersuasive for reasons stated above apropos of those claims.

Regarding Claims 15-21, on pages 31-32 of the Brief, appellant refers generally back to arguments made apropos of claims previously discussed. While appellant does not make specific correspondences, examiner notes that the additional limitations introduced in Claims 15-21 are essential similar to those of Claims 2, 4 and 6-10, respectively. As such, appellants arguments are unpersuasive for reasons stated above apropos of those claims.

In summary, appellant mainly alleges patentability based on a narrow reading of broad claim limitations regarding component values along with narrow reading of broad disclosure in the Pett

reference of corresponding limitations. Appellant further alleges patentability based on application of well-known and obvious techniques such as the use of a diode for voltage protection, the rating of components to withstand expected conditions, the use of water-tight enclosures for devices located outdoors.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Daniel Swerdlow

Conferees:

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SUPERVISORY PATENT EXAMINER

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